



AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A semiconductor device production apparatus comprising:
 - a rotary table section including a rotary table for supporting a wafer thereon and a hollow shaft for rotating the rotary table;
 - a chamber for housing the rotary table section;
 - a heater provided in the chamber for heating the wafer;
 - a thermocouple having distal and proximal ends, the distal end of the thermocouple being brought into close relation to the wafer;
 - a temperature measuring section coupled to the proximal end of the thermocouple and provided in the vicinity of the hollow shaft for sensing a temperature of the wafer through the thermocouple and converting the sensed temperature into a first signal;
 - a signal generating section for converting the first signal into a second signal detectable from outside the chamber; [[and]]
 - a system for circulating cooling water in the hollow shaft to cool the temperature measuring section coupled to the proximal end of the thermocouple; and
 - wherein the heater and the thermocouple are provided on opposite sides of the wafer.

2. (Canceled)

3. (Original) A semiconductor device production apparatus as set forth in claim 1, wherein the signal generating section comprises a detachable storage device for converting the first signal into a storage data to store the storage data as the second signal.

4. (Original) A semiconductor device production apparatus as set forth in claim 1, wherein the signal generating section comprises a wireless transmitter for converting the first signal into a wireless signal to transmit the wireless signal as the second signal.

5. (Original) A semiconductor device production apparatus as set forth in claim 1, wherein the signal generating section comprises a display device for converting the first signal into display data to display the display data as the second signal.

6. (Original) A semiconductor device production apparatus as set forth in claim 3, further comprising a storage data reader for read out the storage data from the storage device and a heater controlling section for controlling the heater on the basis of the read out storage data, the storage data reader and the heater controlling section being provided outside the chamber.

7. (Original) A semiconductor device production apparatus as set forth in claim 4, further comprising a receiver for receiving the wireless signal from the transmitter, and a heater controlling section for controlling the heater on the basis of the received signal, the receiver and the heater controlling section being provided outside the chamber.

8. (Withdrawn) A semiconductor device production method comprising the steps of:

providing a semiconductor device production apparatus as recited in claim 1;
placing a wafer on the rotary table;
heating the wafer by the heater;
supplying a material gas into the chamber;
detecting the second signal outside the chamber; and
controlling the heater on the basis of the detected second signal for production of
a semiconductor device.

9. (Previously presented) The semiconductor device production apparatus of claim 1,
further comprising a cooling section for cooling at least one of the temperature measuring section
and the signal generating section.

10. (Previously presented) The semiconductor device production apparatus of claim 9,
wherein the cooling section includes a circulating system of cooling water.

11. (Currently amended) A semiconductor device production apparatus comprising:
a rotary table section including a rotary table for supporting a wafer and a hollow shaft
for rotating the rotary table;
a chamber for housing the rotary table section;
a heater provided in the chamber for heating the wafer;
a temperature sensing device for sensing a temperature of the wafer, the temperature
sensing device having a distal end and a proximal end, the distal end being brought into close
relation to the wafer;

a temperature measuring section for converting the sensed temperature into a first signal to output the first signal;

a signal generating section for converting the output first signal into a second signal detectable from outside the chamber;

a cooling section for cooling at least one of the temperature measuring section and the signal generating section, wherein the cooling section comprises a system for circulating cooling fluid in the hollow shaft to cool the temperature measuring section coupled to the proximal end of the temperature sensing device; [[and]]

wherein the temperature sensing device, the temperature measuring section and the signal generating section are attached to the rotary table section; and

wherein the temperature sensing device and the heater are provided on opposite sides of the wafer.

12. (Previously presented) The semiconductor device production apparatus of claim 11, wherein the cooling fluid comprises water.

13. (Previously presented) The semiconductor device production apparatus of claim 1, wherein the thermocouple, the temperature measuring section and the signal generating section are attached to the rotary table section, and the distal end of the thermocouple projects outwardly from a surface of the rotary table so as to be brought into close relation to or in contact with a bottom surface of the wafer.

14. (New) The semiconductor device production apparatus of claim 1, wherein the heater and the hollow shaft are provided on opposite sides of the wafer.

15. (New) The semiconductor device production apparatus of claim 11, wherein the heater and the hollow shaft are provided on opposite sides of the wafer.